

Claims 22-33 are added. New claims 22-33 are directed to a disk drive device that comprises a suspension structure and an actuator having at least a first electro-active element, a first and second conductor, and an insulator. The conductors are not in electrical contact with the suspension structure. Those amendments are supported in the specification at page 12, lines 17-26, page 13, lines 16-22, and page 26, lines 1-4, as well as in the original claims. Attached is a marked-up copy of the amended claims, as well as a clean copy of the complete set of pending claims as amended. No new matter is introduced by these amendments.

Remarks

Claims 1-20 were considered in the Office Action of September 6, 2000. Claim 5 was rejected under 35 U.S.C. § 112, second paragraph. In addition, certain of the claims were rejected under 35 U.S.C. § 102(a) over Hathaway, U.S. Patent No. 4,099,211 ("Hathaway"); Chida et al., U.S. Patent No. 4,812,698 ("Chida"); or Itsumi et al., U.S. Patent No. 5,101,278 ("Itsumi"). Finally, certain of the claims were rejected under 35 U.S.C. § 103(a) over Hathaway, Chida, or Itsumi, either alone or in view of Lazarus et al., U.S. Patent No. 5,656,882 ("Lazarus"). Applicants address the rejections below inasmuch as they may apply to the claims as amended.

1. The Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 5 was rejected under 35 U.S.C. § 112, second paragraph. Inasmuch as Applicants have canceled claim 5 herein, Applicants respectfully submit that the rejection under 35 U.S.C. § 112, second paragraph has been obviated. As such, Applicants respectfully request that the rejection under 35 U.S.C. § 112 be withdrawn.

2. The Rejections Under 35 U.S.C. § 102(a)

Claims 1-6, 8-10, and 13-17 were rejected under 35 U.S.C. § 102 over Hathaway, Chida or Itsumi. Applicants respectfully note that those claims have been canceled herein and are therefore not addressed in this discussion. For the reasons discussed below, Applicants

respectfully submit that the rejection should not be maintained against the claims as amended herein.

Anticipation under 35 U.S.C. §102 requires that a single reference teach each and every element of a claim. Verdegaal Bros. v. Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Each of new claims 21-33 recite a disk drive device comprising a suspension structure which is bonded to an actuator that has at least a first electro-active element, and first and second conductors, the electro-active element and conductors of which are not in electrical contact with the suspension structure. None of Hathaway, Chida and Itsumi discloses all of the elements expressly recited by Applicants' claims as amended. As such, Applicants' respectfully request that the rejection under 35 U.S.C. § 102 be reconsidered and withdrawn.

3. The Rejections Under 35 U.S.C. § 103

Claims 7, 11, 12, and 18-20 were rejected under 35 U.S.C. § 103 over Hathaway, Chida or Itsumi, either alone or in view of Lazarus. Applicants respectfully note that those claims have been canceled herein and are therefore not addressed in this discussion. For the reasons discussed below, Applicants respectfully submit that the rejection should not be maintained against the claims as amended herein.


For *prima facie* obviousness under 35 U.S.C. § 103, the prior art references must teach or suggest all claim limitations. See e.g., In re Vaeck, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). As discussed above, Hathaway, Chida and Itsumi fail to disclose every element of Applicants' claims as amended. Lazarus fails to supply all of the missing elements. As such, Applicants request that the rejection under 35 U.S.C. § 103 be reconsidered and withdrawn.

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Conclusion

Applicants respectfully submit that the claims are now in condition for allowance. If the Examiner believes that a conversation with Applicants' attorney would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at the telephone number below.

Respectfully submitted,


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Attachment A
Amended Claims in Mark-Up Format

--22. (New) A disk drive device comprising

a suspension structure; and

an actuator having

at least a first electro-active element;

a first conductor in direct electrical contact with said first electro-active element;

a second conductor in direct electrical contact with said first electro-active element; and

an insulator bonded to said first electro-active element,

wherein said first electro-active element and said first and second conductors are not in electrical contact with said suspension structure, and

wherein said actuator is bonded to said suspension structure such that in-plane strain in said electro-active element is effectively shear-coupled between said electro-active element and said insulator, and

wherein said in-plane strain in said insulator is effectively shear-coupled between said insulator and said suspension structure.

23. (New) The disk drive device of claim 22 wherein said actuator further comprises an inactive element.

24. (New) The disk drive device of claim 22 wherein said actuator further comprises an enclosing layer encasing said electro-active element and said conductors, and wherein said actuator forms a card.

25. (New) The disk drive device of claim 22 wherein said actuator further comprises at least a second electro-active element.

26. (New) The disk drive device of claim 25 wherein said first electro-active element is driven in a positive orientation relative to its poling field, and said second electro-active element is driven in a negative orientation relative to its poling field.

27. (New) The disk drive device of claim 22 wherein said first electro-active element comprises a first region and a second region, and wherein said first conductor is in electrical contact with said first region and said second conductor is in electrical contact with said second region.

28. (New) The disk drive device of claim 27 wherein said first and second regions of said first electro-active element are poled in opposite directions.

29. (New) The disk drive device of claim 27 wherein said first and second regions of said first electro-active element are poled in the same direction.

30. (New) The disk drive device of claim 22 wherein said insulator is positioned between said suspension structure and said electro-active element.

31. (New) The disk drive device of claim 24 wherein said encasing layer is an electrical insulator, and wherein said actuator is bonded to said suspension structure with an adhesive layer positioned between said encasing layer and said suspension structure.

32. (New) A disk drive device comprising

a suspension structure; and

an actuator having

at least a first electro-active element;

a first conductor in direct electrical contact with said first electro-active element;

a second conductor in direct electrical contact with said first electro-active element; and

an insulator bonded to said first electro-active element and said suspension structure,

wherein said first electro-active element and said first and second conductors are not in electrical contact with said suspension structure, and

wherein said actuator is bonded to said suspension structure such that in-plane strain in said electro-active element is effectively shear-coupled between said electro-active element and said suspension structure.

33. (New) A disk drive device comprising

a suspension structure; and

an actuator having

at least a first electro-active element;

a first conductor in direct electrical contact with said first electro-active element;

a second conductor in direct electrical contact with said first electro-active element; and

an insulator bonded to said first electro-active element and said suspension structure,

wherein said first electro-active element and said first and second conductors are not in electrical contact with said suspension structure, and

wherein said actuator is bonded to said suspension structure such that in-plane strain in said electro-active element acts on said suspension structure.--